

WHAT IS CLAIMED IS:

1. A compressor assembly for compressing a gas and lubricated with an oil, said compressor assembly comprising:

a housing;

a discharge chamber defined within said housing;

a compressor mechanism disposed within said housing and defining a working space in which gas is compressed, said compressor mechanism having a first port in communication with said discharge chamber whereby oil and compressed gas are communicated from said working space to said discharge chamber; and

a second port in said discharge chamber defining an outlet in said housing through which oil and compressed gas are discharged from said compressor assembly, said second port disposed vertically below said first port in a lower half of said discharge chamber whereby oil collected within said discharge chamber is dischargable with the compressed gas through said second port and wherein substantially all fluids entering said discharge chamber enter through said first port and substantially all fluids exiting said discharge chamber exit through said second port.

2. The compressor assembly of claim 1 further comprising a valve sealingly engageable with said first port, said valve allowing fluids to enter said discharge chamber from said working space and inhibiting passage of fluids from said discharge chamber to said working space.

3. The compressor assembly of claim 1 further comprising a discharge tube, said discharge tube having an inlet positioned in said discharge chamber, said inlet defining said second port.

4. The compressor assembly of claim 3 wherein said discharge tube extends through said housing and said housing includes a relatively flat portion adjacent said discharge tube, said discharge tube being welded to said housing at said flat portion.

5. The compressor assembly of claim 1 wherein said compressor mechanism comprises a fixed scroll member and an orbiting scroll member, said fixed and orbiting scroll members being mutually engaged, said first port located in said fixed scroll member.

6. A compressor assembly for compressing a gas and lubricated with an oil, said compressor assembly comprising:

a hermetically sealed housing defining a high pressure discharge chamber defining a first volume and a low pressure chamber;

a compressor mechanism disposed within said housing, said compressor mechanism operably disposed between said high pressure discharge chamber and said low pressure chamber and defining a working space in which gas is compressed;

a motor for driving said compressor mechanism, said motor located in said low pressure chamber;

a first port in communication with said working space and said high pressure chamber wherein compressed gas and oil are communicated from said working space to said high pressure chamber;

a second port defining an outlet in said housing and in communication with said high pressure chamber, said second port disposed vertically below said first port wherein a majority of said first volume is disposed vertically above said second port and wherein substantially all fluids entering said discharge chamber enter through said first port and substantially all fluids exiting said discharge chamber exit through said second port.

7. The compressor assembly of claim 6 further comprising a discharge tube, said discharge tube having an inlet positioned in said high pressure chamber, said inlet defining said second port.

8. The compressor assembly of claim 7 wherein said discharge tube extends through said housing and said housing includes a relatively flat portion adjacent said discharge tube, said discharge tube being welded to said housing at said flat portion.

9. The compressor assembly of claim 6 wherein said compressor mechanism comprises a fixed scroll member and an orbiting scroll member, said fixed and orbiting scroll members being mutually engaged, said first port defined by said fixed scroll member.

10. The compressor assembly of claim 9 further comprising a valve sealingly engageable with said first port, said valve allowing fluids to enter said high pressure chamber and inhibiting passage of fluids from said high pressure chamber through said first port.

11. The compressor assembly of claim 6 wherein said housing defines an inlet opening in communication with said low pressure chamber.

12. The compressor assembly of claim 6 wherein said low pressure chamber defines an oil sump.

13. A method of controlling the movement and accumulation of oil in a compressor mechanism, said method comprising

providing an hermetically sealed housing defining a high pressure chamber and a low pressure chamber;

providing a compressor mechanism within said housing;

compressing a gas with said compressor mechanism and discharging oil and compressed gas from said compressor mechanism into said high pressure chamber through a first port;

accumulating oil in a bottom portion of said high pressure chamber;

positioning a second port in said high pressure chamber vertically between said bottom portion and said first port;

limiting the accumulation of oil within said high pressure chamber by discharging excess oil through said second port together with compressed gas; and

enclosing said high pressure chamber wherein substantially all fluids entering and discharged from said high pressure chamber enter and exit said high pressure chamber through said first and second ports.

14. The method of claim 13 further comprising providing a motor for driving said compressor mechanism and disposing said motor in said low pressure chamber.

15. The method of claim 14 further comprising the step of circulating oil within said low pressure chamber.

16. The method of claim 15 said step of circulating oil within said low pressure chamber includes collecting oil within an oil sump disposed within said low pressure chamber.

17. The method of claim 13 wherein said compressor mechanism comprises a fixed scroll member and an orbiting scroll member and said step of compressing a gas with said compressor mechanism includes orbiting said orbiting scroll member relative to said fixed scroll member.